

**DECLARATION AND POWER OF ATTORNEY**  
(Case No. 12569US01)

As the below-named inventors, we hereby declare that:  
our residence, post office address, and citizenship are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter which is  
claimed and for which a patent is sought on the invention entitled

**REDUCED RANK ADAPTIVE FILTER**

the specification of which is attached hereto.

We hereby state that we have reviewed and understand the contents of the above-  
identified specification, including the claims.

We acknowledge the duty to disclose information which is material to the examination of  
this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

And we hereby appoint:

**PTO REGISTRATION NUMBERS**

George P. McAndrews	Reg. No. 22,760	Donald J. Pochopien	Reg. No. 32,167
John J. Held	Reg. No. 21,061	Sharon A. Hwang	Reg. No. 39,717
Timothy J. Malloy	Reg. No. 25,600	David D. Headrick	Reg. No. 40,642
William M. Wesley	Reg. No. 26,521	Dean D. Small	Reg. No. 34,730
Lawrence M. Jarvis	Reg. No. 27,341	Alejandro Menchaca	Reg. No. 34,389
Gregory J. Vogler	Reg. No. 31,313	Kirk A. Vander Leest	Reg. No. 34,036
Jean Dudek Kuelper	Reg. No. 30,171	Richard T. McCaulley, Jr.	Reg. No. 41,977
Herbert D. Hart III	Reg. No. 30,063	Anthony E. Dowell	Reg. No. 39,661
Robert W. Fieseler	Reg. No. 31,826	Peter J. McAndrews	Reg. No. 38,547
D. David Hill	Reg. No. 35,543	Michael B. Harlin	Reg. No. 43,658
Thomas J. Wimbiscus	Reg. No. 36,059	Jonathan R. Sick	Reg. No. 43,920
Steven J. Hampton	Reg. No. 33,707	Eligio C. Pimentel	Reg. No. 42,076
Priscilla F. Gallagher	Reg. No. 32,223	John F. Nethery	Reg. No. 42,928
Stephen F. Sherry	Reg. No. 30,590	James Nuttall	Reg. No. 44,978
Patrick J. Arnold Jr.	Reg. No. 37,769	James P. Murphy	Reg. No. 40,741
George Wheeler	Reg. No. 28,766	Dean A. Pelletier	Reg. No. 45,007
Janet M. McNicholas	Reg. No. 32,918	Joseph M. Barich	Reg. No. 42,291
Ronald E. Larson	Reg. No. 24,478	Scott P. McBride	Reg. No. 42,853
Christopher C. Winslade	Reg. No. 36,308	Patricia J. McGrath	Reg. No. 44,919
Edward A. Mas II	Reg. No. 37,179	Jennifer E. Lacroix	Reg. No. P46,852
Gregory C. Schodde	Reg. No. 36,668		
Edward W. Remus	Reg. No. 25,703		

the address and telephone number of each of whom is McAndrews, Held & Malloy, Ltd., 500 West Madison Street, 34th Floor, Chicago, Illinois 60661, 312-775-8000, as our attorneys with full power of substitution and revocation to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of inventor Michael L. Honig

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Resident Address 2740 Eastwood Avenue

Evanston, IL 60201

Citizenship United States of America

Post Office Address Same as above

Attorney Docket No.: 12569US01

PATENT

Applicant or Patentee: Michael L. Honig

Filed herewith for: REDUCED RANK ADAPTIVE FILTER

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.27(d) - NONPROFIT ORGANIZATION)**

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

Name of Nonprofit Organization	<u>Northwestern University</u>
Address of Nonprofit Organization	<u>633 Clark Street</u>
	<u>Evanston, Illinois 60208</u>

**TYPE OF NONPROFIT ORGANIZATION**

- ☒ University or Other Institution of Higher Education
- ☐ Tax Exempt Under Internal Revenue Service Code (26 USC 501(a) and 501(c)(3))
- ☐ Nonprofit Scientific or Educational Organization Qualified Under a Statute of a State of the United States of America
- (Name of State \_\_\_\_\_)
- (Citation of Statute \_\_\_\_\_)
- ☐ Would Qualify as Tax Exempt Under International Revenue Service Code (26 USC 501(a) and 501(c)(3)), if Located in the United States of America
- ☐ Would Qualify as Nonprofit Scientific or Educational Organization Under a Statute of a State of the United States of America if Located in the United States of America
- (Name of State \_\_\_\_\_)
- (Citation of Statute \_\_\_\_\_)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization, as defined in 37 CFR 1.9(e), for purposes of paying reduced fees to the United States Patent and Trademark Office under Section 41(a) and (b) of Title 35, United States Code, with regard to the invention described in

- ☐ the specification filed herewith, with title as listed above.
- ☐ the application identified above.
- ☐ the patent identified above.

I hereby declare that rights under contract or law have been conveyed to and remain with, the nonprofit organization, with regard to the above-identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR 1.9(c), if that person made the invention, or by any concern that would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities: (37 CFR 1.27).

Each such person, concern or organization having any rights in the invention is listed below.

☐ No such person, concern or organization exists.

☐ Each such person, concern or organization is listed below.

FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: \_\_\_\_\_  
TITLE OF PERSON OTHER THAN OWNER: \_\_\_\_\_  
ADDRESS OF PERSON SIGNING: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_